

Contact Process sulfuric acid

Stage of process	
Raw materials	<ul style="list-style-type: none"> Sulfur or a sulfide ore Oxygen from the air Water
Catalysed equation	<ul style="list-style-type: none"> $2\text{SO}_{2(g)} + \text{O}_{2(g)} \rightleftharpoons 2\text{SO}_{3(g)}$ Physical conditions required: atmospheric pressure and high temperature $350\text{--}450^{\circ}\text{C}$
Process to convert raw materials into reactants	<ul style="list-style-type: none"> Sulfur can be burnt in air $\text{S}_{(s)} + \text{O}_{2(g)} \rightarrow \text{SO}_{2(g)}$ or Sulfide ore can be burnt in air $2\text{ZnS}_{(s)} + 3\text{O}_{2(g)} \rightarrow 2\text{ZnO}_{(s)} + 3\text{SO}_{2(g)}$
Getting product – $\text{H}_2\text{SO}_{4(l)}$	<ul style="list-style-type: none"> $\text{SO}_{3(g)} + \text{H}_2\text{SO}_{4(l)} \rightarrow \text{H}_2\text{S}_2\text{O}_7(l)$ $\text{H}_2\text{S}_2\text{O}_7(l) + \text{H}_2\text{O}_{(l)} \rightarrow 2\text{H}_2\text{SO}_{4(l)}$
$\text{H}_2\text{SO}_{4(l)}$ is used for...	<ul style="list-style-type: none"> To make fertilizers such $(\text{NH}_4)_2\text{SO}_4$ and superphosphate To make synthetic fibre In water (aqueous) solution as a cleaning agent To clean metal surfaces before plating and painting In car batteries

